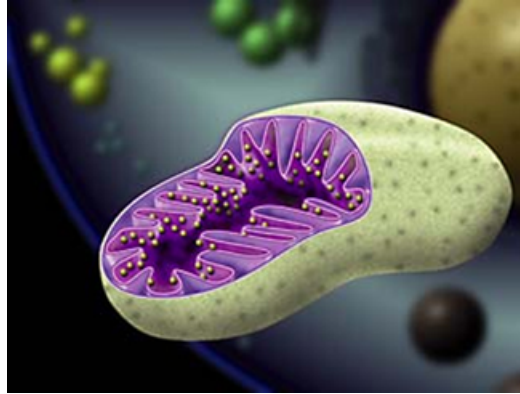


## Cell Parts

Organelle - "tiny organ" perform a specialized job within the cell

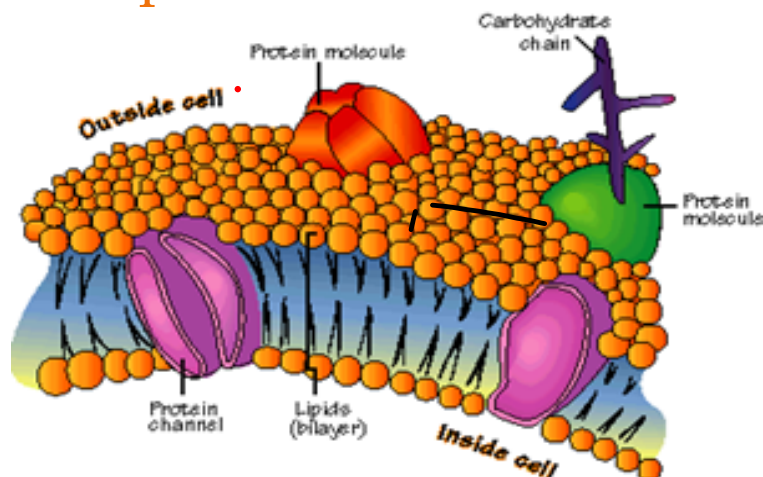
Nuclear envelope/membrane - a semi-permeable (some things can get in and out but not everything) membrane that surrounds and protects the nucleus

**Mitochondria** - This is where cellular respiration takes place and energy is provided to the organism.  
Also known as the "POWER PLANT" of the cell



**Lysosome** - known as suicide sacs contain digestive enzymes that breakdown food, help digest wastes and worn out cells parts

The **cell membrane** - it controls the movement of materials in and out of the cell. It's semi permeable

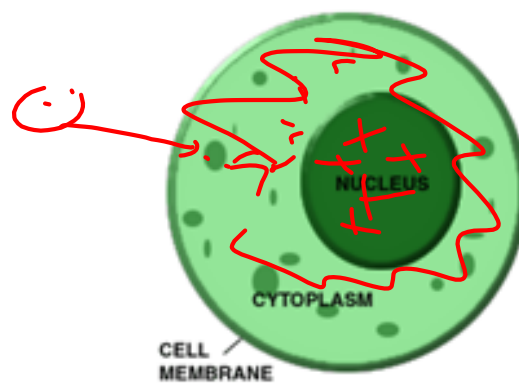


## Golgi Complex/Bodies/Apparatus

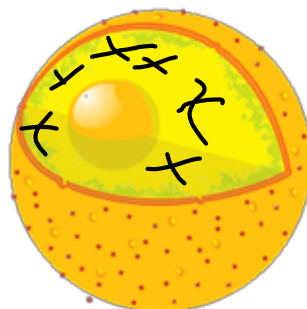
a storage and packaging facility for proteins

Vacuole - fluid filled storehouse that contain water, food, CO<sub>2</sub> and wastes

The **cytoplasm** is a jelly-like material that supports the nucleus and the other organelles.



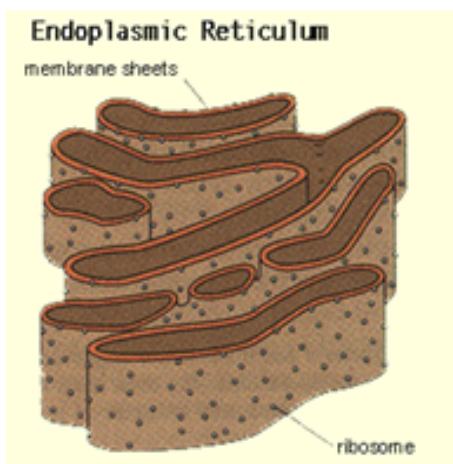
The **nucleus** acts as the control center for the cell - where DNA is found



Nucleolus - small dense region within the nucleus where ribosomes are first assembled (but scientists are not 100% sure about this)

The **endoplasmic reticulum** is a series of canals that transports materials (proteins) to different parts of the cell.

- assemble parts of the cell membrane, breakdown drugs



Rough Endoplasmic Reticulum has ribosomes attached. Smooth E.R. does not.

Ribosomes - make/assemble proteins from amino acids which are required for cell growth and reproduction

## Lesson 2B Cell Parts.notebook

**Chloroplasts** contain the green pigment chlorophyll... the site of photosynthesis.

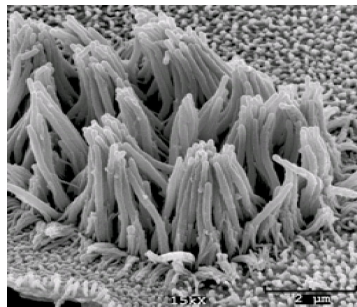
**Cell wall** is made of cellulose and provides protection and support for the plant cell.

**Centriole** is a small protein that chromosomes attach to in cell division of an animal cell

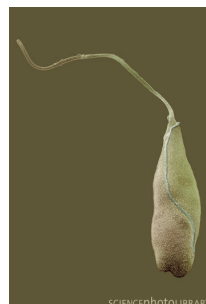
- Cytoskeleton – a network of protein filaments that give a cell its shape
- Microtubules<sup>straw</sup> and microfilaments<sup>hair</sup> make up the cytoskeleton



**Cilia** are tiny hair-like structures that help transport materials in certain cells.



**Flagella** are thread-like fibers (tails) that propel certain cells (ex. sperm)



<https://www.youtube.com/watch?v=1Z9pqST72is>

<http://www.bozemanscience.com/a-tour-of-the-cell>

## Plant and Animal Cell Differences

Animal	Plant
No cell wall	cell wall
No chloroplast	have chloroplast
Smaller / more vacuoles	larger vacuoles (1 or 2)
tend to have lysosome	usually no lysosome
usually round	usually polygonal
centrioles	No centrioles

- Eukaryotic Cells – These are cells that have a true nucleus containing genetic material
- Examples: Plant cells and Animal cells
- Prokaryotic Cells – These are cells that lack a nucleus but do have genetic material in the cytoplasm
- Examples: Bacteria and Blue-Green Algae